REMARKS

I. General

Claims 1-15 are pending in the application. In the Final Office Action mailed May 6, 2005, claims 1-15 stand rejected. The issues in the Final Office Action are:

Claims 1, 3-5, 13-15 stand rejected under 35 U.S.C. § 102(b) as anticipated by *Pflugrath et al.* (U.S. Patent No. 5,722,412, hereinafter *Pflugrath*).

Claims 3-5 and 13-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pflugrath* alone or further in view of *Olson* (U.S. Patent No. 5,495,422) or *Langford, II et al.* (U.S. Patent No. 5,115,435, hereinafter *Langford, II*).

Claims 2 and 7-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pflugrath* in view of *Fazioli et al.* (U.S. Patent No. 6,527,722, hereinafter *Fazioli*).

Claims 3, 6, and 13-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pflugrath*, further in view of *Gilling* (U.S. Patent No. 6,126,601), alone or further in view of *Olson* or *Langford, II*.

In an Advisory Action mailed September 14, 2005, the Examiner has indicated that the amendments to the claims proposed in the Amendment After Final Action mailed by Applicant on July 6, 2005 would not be entered as raising new issues requiring new consideration and/or search. Applicant has filed a Request for Continued Examination herewith and requests reconsideration of the outstanding claim rejections in view of the arguments and amendments presented herein.

II. Claim Rejections under 35 U.S.C. § 102(b)

Claims 1, 3-5, 13-15 stand rejected under 35 U.S.C. § 102(b) as anticipated by *Pflugrath*. Applicant respectfully traverses the rejection of record for the reasons set forth in the amendment, dated February 2, 2005 and for the reasons set forth below.

Claim 1 has been amended to expressly recite limitations previously asserted to be in the recited PW-ASIC by Applicant in the Response filed February 2, 2005. No new matter

has been added as these limitations are not only asserted to have been implicit in the language as originally submitted, but are supported in the specification at, for example, Paragraph 0015. Moreover, the amendment to claim 1 does not present new issues requiring further search and consideration as Applicant has previously asserted that the language of the claim required that which is expressly recited in the amended language. In a telephone conference on July 5, 2005, the Examiner agreed to permit and consider the after-final amendment to claim 1.

Claim 1 recites "[a] pulse wave Doppler application specific integrated circuit (PW-ASIC) comprising transmit and receive circuitry and a plurality of wave form generation circuits." *Pflugrath* teaches a portable unit comprising a separate transmit/receive ASIC, front-end ASIC for beamforming, and digital signal processing ASIC for performing Doppler processing. Col. 2, line 51-col. 3, line 13. The transmit/receive ASIC of *Pflugrath* does not comprise wave form generation circuits, which are located instead in a separate front-end ASIC. *See Pflugrath*, col. 7, lines 25-33. Accordingly, *Pflugrath* does not teach a PW-ASIC and does not anticipate claim 1 under 35 U.S.C. § 102.

Claim 3 recites "[a]n ultrasound system application specific integrated circuit (US-ASIC) having at least one beam former, a transducer controller, one or more digital signal processors), and a plurality of input/output channels . . . ." In rejecting this claim, the Examiner asserts that "[a]ll ASIC functions of 20, 30, 40 and 50 may be combined within a single ASIC circuit board," the final Office Action at page 2. However, placing multiple ASICs on a single printed circuit board does not meet the recited US-ASIC having the foregoing features. Moreover, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, "[t]he elements must be arranged as required by the claim," see M.P.E.P. § 2131, citing *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). As such, the disclosure of *Pflugrath* is insufficient to anticipate the claim under 35 U.S.C. § 102.

Claims 4-5 and 13-15 each depend, respectively, from claims 1 and 3, and thus inherit all limitations of claims 1 and 3. Each of claims 1 and 3 recites features not taught by *Pflugrath*, as shown above. Accordingly, Applicant respectfully asserts that for the above reasons, and as set forth in the amendment, dated February 2, 2005, claims 4-5 and 13-15 are patentable over the 35 U.S.C. § 102 rejections of record.

III. Claim Rejections Under 35 U.S.C. § 103(a)

Claims 3-5 and 13-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pflugrath* alone or further in view of *Olson* or *Langford, II.* Claims 2 and 7-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pflugrath* in view of *Fazioli.* Applicant respectfully traverses the rejection of record for the reasons set forth in the amendment, dated February 2, 2005 and for the reasons set forth below.

In responding to Applicant having previously shown that the applied references do not teach a PC-ASIC meeting the express limitations in the combination set forth in claim 2 or a US-ASIC meeting the express limitations in the combination set forth in claim 3, the Examiner asserts that "the references suggest further integration of ASIC functions based upon such circuit design knowledge with respect to efficiency of manufacture, and the combination of PW/CW functions into a single circuit as addressed above," the final Office Action at page 9. However, the foregoing, assuming *arguendo* the statement is accurate, merely establishes that some level of further integration of ASIC functions were suggested. However, the level of integration expressly recited in the claims remains to be shown in, or obvious from, the art of record. The prior art must suggest the desirability of the claimed invention, M.P.E.P. § 2143.01. Merely generally showing some unspecified level of further integration was known or even desired is insufficient to render the present claims obvious under 35 U.S.C. § 103.

Claims 4-6 each depend from claim 1, and thus inherit all limitations of this base claim. Claim 1 recites features not taught by the primary reference, *Pflugrath*, as shown above. The 35 U.S.C. § 103 rejections of record do not cure the deficiencies identified above with respect to the applied art. Accordingly, Applicant respectfully asserts that for the above reasons, and as set forth in the amendment, dated February 2, 2005, claims 4-6 are patentable over the 35 U.S.C. § 103 rejections of record.

Claims 7-15 each depend from respective ones of claims 2 and 3, and thus inherit all limitations of their respective one of the base claims. Each of claims 2 and 3 recites features not taught by the references of record, as shown above. Accordingly, Applicant respectfully asserts that for the above reasons, and as set forth in the amendment, dated February 2, 2005, claims 7-15 are patentable over the 35 U.S.C. § 103 rejection of record.

IV. Summary

In view of the above, Applicant believes the pending application is in condition for allowance.

Applicant has included a fee for the Request for Continued Examination and a one-month extension fee. In the Advisory Action, the Examiner states that the period for reply to the final Office Action expires three months from the mailing date of the final rejection. Applicant respectfully disagrees.

Applicant properly filed the Amendment After Final Action on July 6, 2005, within two months of the final Office Action mailed May 6, 2005. Under M.P.E.P § 706.07(f), if a first reply is filed within 2 months of the mailing date of the final rejection, the statutory period for reply expires on the later of three months from the mailing date of the final rejection or as of the mailing date of the Advisory Action. Here, the Advisory Action was mailed on September 14, 2005 and therefore the period for reply expired on September 14, 2005. Accordingly, Applicant believes that only a one-month extension fee is due, and has included the fee herewith.

However, if an additional fees are due, please charge our Deposit Account No. 06-2380, under Order No. 65744/P011C1/10313161 from which the undersigned is authorized to draw.

Dated: October 6, 2005

Respectfully submitted,

By _____

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